

One Energy Partners

GL=3574 @ 3599.00usft (KB +25')

Ground Level: 3574.00

Project: Lea County, NM (NAD 27)

Site: Loveland BS1 State Com

Well: 1H

Wellbore: Wellbore #1

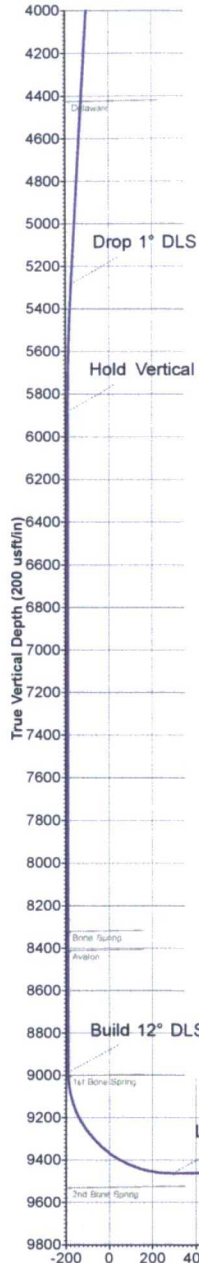
Design: Plan 1

Rig: KB +25'

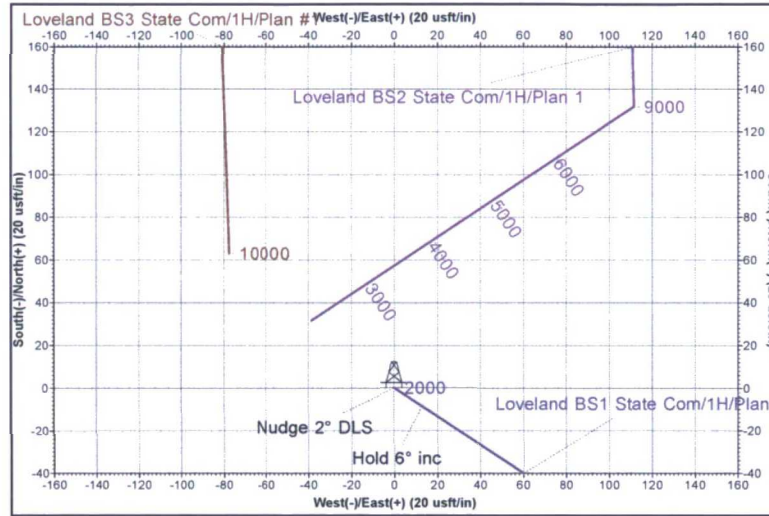
Map System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone Name: New Mexico East 3001



Azimuths to Grid North
True North: -0.49°
Magnetic North: 6.40°
Magnetic Field
Strength: 48055.2nT
Dip Angle: 60.22°
Date: 12/6/2017
Model: BGGM2017

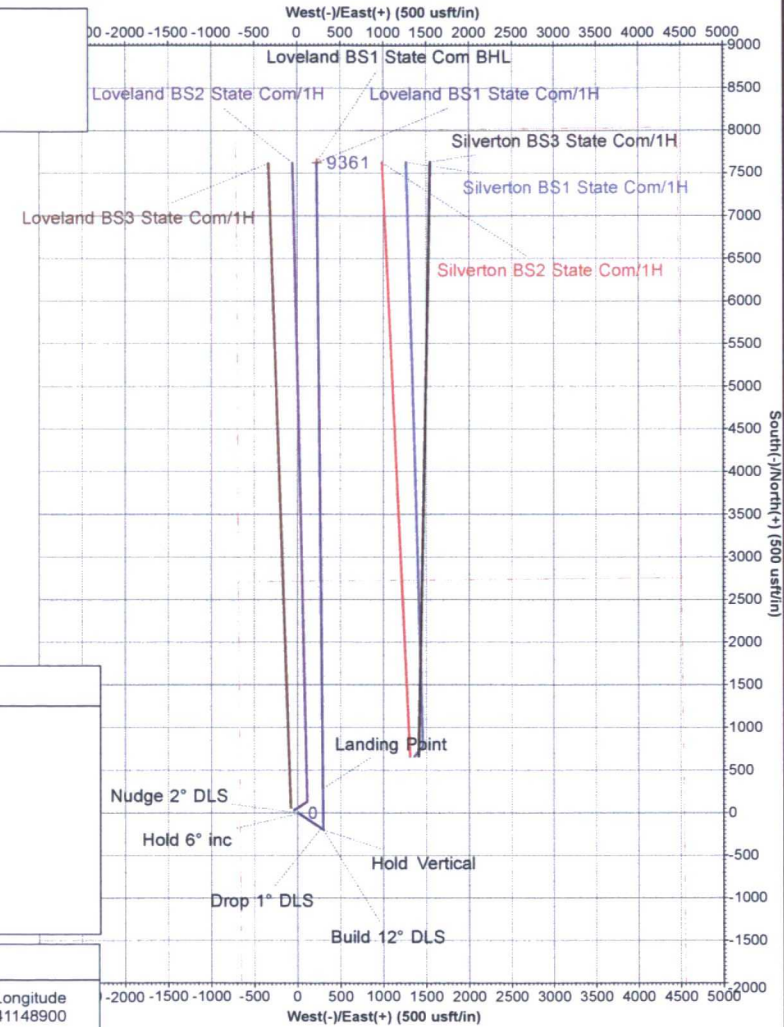


WELL DETAILS					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	507317.82	784258.42	32.39136700	-103.41243900



SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	Vsect	Annotation	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
2000.00	0.00	0.00	2000.00	0.00	0.00	0.00	0.00		Nudge 2° DLS
2299.79	6.00	123.69	2299.24	-8.69	13.04	2.00	-8.30		Hold 6° inc
5301.49	6.00	123.69	5284.52	-182.61	273.92	0.00	-174.36		Drop 1° DLS
5901.06	0.00	0.00	5883.00	-200.00	300.00	1.00	-190.96		Hold Vertical
9003.81	0.00	0.00	8985.75	-200.00	300.00	0.00	-190.96		Build 12° DLS
9760.48	90.80	359.47	9463.17	284.11	295.52	12.00	292.80		Landing Point
17099.35	90.80	359.47	9360.70	7621.95	227.56	0.00	7625.35		BHL

DESIGN TARGET DETAILS							
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Loveland BS1 State Com BBL00	7621.95	7621.95	227.56	514939.77	784485.97	32.41231100	-103.41148900



HALLIBURTON | Sperry Drilling

Vertical Section at 1.71° (200 usft/in)

KB +25'

One Energy Partners

Lea County, NM (NAD 27) Loveland BS1 State Com

API#

1H

Wellbore #1

Plan: Plan 1

Please review plan for Magnetic Toolface Switchover.

Highlighted inclination-tangent sections are between 4 and 6°.

Sperry Drilling Services

Combo Report

08 December, 2017

Well Coordinates: 32° 23' 28.92" N
103° 24' 44.78" W

NAD 1927 (NADCON CONUS)
New Mexico East 3001
507,317.82 N
784,258.42 E

Ground Level: 3,574.00 usft

Local Coordinate Origin:

Viewing Datum:

TVDs to System:

North Reference:

Unit System:

Centered on Site Loveland BS1 State Com

GL=3574 @ 3599.00usft (KB +25')

N

Grid

Midcon (2 decimal)

Version: 5000.1 Build: 81D

Report Version: Midcon Combo v1.11

HALLIBURTON

Plan Report for 1H - Plan 1

Measured Depth (usft)	Inclination (°)	Grid Azimuth (°)	TVD below System (usft)	Vertical Depth (usft)	Local Coordinates		Map Coordinates		Dogleg Rate (°/100usft)	Vertical Section (usft)	Comments
					Northing (usft)	Easting (usft)	Northing (usft)	Easting (usft)			
0.00	0.00	0.00	-3,599.00	0.00	0.00 N	0.00 E	507,317.82	784,258.42	0.00	0.00	Loveland BS1 State Com BHL
100.00	0.00	0.00	-3,499.00	100.00	0.00 N	0.00 E	507,317.82	784,258.42	0.00	0.00	
200.00	0.00	0.00	-3,399.00	200.00	0.00 N	0.00 E	507,317.82	784,258.42	0.00	0.00	
300.00	0.00	0.00	-3,299.00	300.00	0.00 N	0.00 E	507,317.82	784,258.42	0.00	0.00	
400.00	0.00	0.00	-3,199.00	400.00	0.00 N	0.00 E	507,317.82	784,258.42	0.00	0.00	
500.00	0.00	0.00	-3,099.00	500.00	0.00 N	0.00 E	507,317.82	784,258.42	0.00	0.00	
549.00	0.00	0.00	-3,050.00	549.00	0.00 N	0.00 E	507,317.82	784,258.42	0.00	0.00	Rustler
600.00	0.00	0.00	-2,999.00	600.00	0.00 N	0.00 E	507,317.82	784,258.42	0.00	0.00	
700.00	0.00	0.00	-2,899.00	700.00	0.00 N	0.00 E	507,317.82	784,258.42	0.00	0.00	
800.00	0.00	0.00	-2,799.00	800.00	0.00 N	0.00 E	507,317.82	784,258.42	0.00	0.00	
900.00	0.00	0.00	-2,699.00	900.00	0.00 N	0.00 E	507,317.82	784,258.42	0.00	0.00	
1,000.00	0.00	0.00	-2,599.00	1,000.00	0.00 N	0.00 E	507,317.82	784,258.42	0.00	0.00	13 3/8"
1,100.00	0.00	0.00	-2,499.00	1,100.00	0.00 N	0.00 E	507,317.82	784,258.42	0.00	0.00	
1,200.00	0.00	0.00	-2,399.00	1,200.00	0.00 N	0.00 E	507,317.82	784,258.42	0.00	0.00	
1,300.00	0.00	0.00	-2,299.00	1,300.00	0.00 N	0.00 E	507,317.82	784,258.42	0.00	0.00	
1,400.00	0.00	0.00	-2,199.00	1,400.00	0.00 N	0.00 E	507,317.82	784,258.42	0.00	0.00	
1,500.00	0.00	0.00	-2,099.00	1,500.00	0.00 N	0.00 E	507,317.82	784,258.42	0.00	0.00	
1,549.00	0.00	0.00	-2,050.00	1,549.00	0.00 N	0.00 E	507,317.82	784,258.42	0.00	0.00	Top of Salt
1,600.00	0.00	0.00	-1,999.00	1,600.00	0.00 N	0.00 E	507,317.82	784,258.42	0.00	0.00	
1,700.00	0.00	0.00	-1,899.00	1,700.00	0.00 N	0.00 E	507,317.82	784,258.42	0.00	0.00	
1,800.00	0.00	0.00	-1,799.00	1,800.00	0.00 N	0.00 E	507,317.82	784,258.42	0.00	0.00	
1,900.00	0.00	0.00	-1,699.00	1,900.00	0.00 N	0.00 E	507,317.82	784,258.42	0.00	0.00	
2,000.00	0.00	0.00	-1,599.00	2,000.00	0.00 N	0.00 E	507,317.82	784,258.42	0.00	0.00	Nudge 2° DLS
2,100.00	2.00	123.69	-1,499.02	2,099.98	0.97 S	1.45 E	507,316.86	784,259.87	2.00	-0.92	
2,200.00	4.00	123.69	-1,399.16	2,199.84	3.87 S	5.81 E	507,313.95	784,264.22	2.00	-3.70	
2,299.79	6.00	123.69	-1,299.76	2,299.24	8.69 S	13.04 E	507,309.13	784,271.46	2.00	-8.30	Hold 6° inc
2,300.00	6.00	123.69	-1,299.55	2,299.45	8.71 S	13.06 E	507,309.12	784,271.47	0.00	-8.31	
2,400.00	6.00	123.69	-1,200.10	2,398.90	14.50 S	21.75 E	507,303.32	784,280.16	0.00	-13.84	
2,500.00	6.00	123.69	-1,100.64	2,498.36	20.29 S	30.44 E	507,297.53	784,288.86	0.00	-19.38	
2,600.00	6.00	123.69	-1,001.19	2,597.81	26.09 S	39.13 E	507,291.74	784,297.55	0.00	-24.91	
2,700.00	6.00	123.69	-901.74	2,697.26	31.88 S	47.82 E	507,285.94	784,306.24	0.00	-30.44	
2,800.00	6.00	123.69	-802.28	2,796.72	37.68 S	56.51 E	507,280.15	784,314.93	0.00	-35.97	
2,900.00	6.00	123.69	-702.83	2,896.17	43.47 S	65.20 E	507,274.35	784,323.62	0.00	-41.50	
3,000.00	6.00	123.69	-603.38	2,995.62	49.26 S	73.90 E	507,268.56	784,332.31	0.00	-47.04	
3,100.00	6.00	123.69	-503.92	3,095.08	55.06 S	82.59 E	507,262.77	784,341.00	0.00	-52.57	
3,200.00	6.00	123.69	-404.47	3,194.53	60.85 S	91.28 E	507,256.97	784,349.69	0.00	-58.10	
3,300.00	6.00	123.69	-305.02	3,293.98	66.65 S	99.97 E	507,251.18	784,358.38	0.00	-63.63	
3,400.00	6.00	123.69	-205.57	3,393.43	72.44 S	108.66 E	507,245.38	784,367.08	0.00	-69.17	
3,500.00	6.00	123.69	-106.11	3,492.89	78.23 S	117.35 E	507,239.59	784,375.77	0.00	-74.70	
3,557.51	6.00	123.69	-48.91	3,550.09	81.57 S	122.35 E	507,236.26	784,380.77	0.00	-77.88	Base of Salt
3,600.00	6.00	123.69	-6.66	3,592.34	84.03 S	126.04 E	507,233.80	784,384.46	0.00	-80.23	

Plan Report for 1H - Plan 1

Measured Depth (usft)	Inclination (°)	Grid Azimuth (°)	TVD below System (usft)	Vertical Depth (usft)	Local Coordinates		Map Coordinates		Dogleg Rate (°/100usft)	Vertical Section (usft)	Comments
Depth (usft)	Inclination (°)	Azimuth (°)	System (usft)	Depth (usft)	Northing (usft)	Easting (usft)	Northing (usft)	Easting (usft)	Rate (°/100usft)	Section (usft)	
3,700.00	6.00	123.69	92.79	3,691.79	89.82 S	134.73 E	507,228.00	784,393.15	0.00	-85.76	
3,800.00	6.00	123.69	192.25	3,791.25	95.62 S	143.42 E	507,222.21	784,401.84	0.00	-91.29	
3,900.00	6.00	123.69	291.70	3,890.70	101.41 S	152.12 E	507,216.41	784,410.53	0.00	-96.83	
4,000.00	6.00	123.69	391.15	3,990.15	107.20 S	160.81 E	507,210.62	784,419.22	0.00	-102.36	
4,100.00	6.00	123.69	490.61	4,089.61	113.00 S	169.50 E	507,204.82	784,427.91	0.00	-107.89	
4,200.00	6.00	123.69	590.06	4,189.06	118.79 S	178.19 E	507,199.03	784,436.61	0.00	-113.42	
4,300.00	6.00	123.69	689.51	4,288.51	124.59 S	186.88 E	507,193.24	784,445.30	0.00	-118.95	
4,400.00	6.00	123.69	788.96	4,387.96	130.38 S	195.57 E	507,187.44	784,453.99	0.00	-124.49	
4,438.01	6.00	123.69	826.77	4,425.77	132.58 S	198.88 E	507,185.24	784,457.29	0.00	-126.59	Delaware
4,500.00	6.00	123.69	888.42	4,487.42	136.18 S	204.26 E	507,181.65	784,462.68	0.00	-130.02	
4,600.00	6.00	123.69	987.87	4,586.87	141.97 S	212.95 E	507,175.85	784,471.37	0.00	-135.55	
4,700.00	6.00	123.69	1,087.32	4,686.32	147.76 S	221.65 E	507,170.06	784,480.06	0.00	-141.08	
4,800.00	6.00	123.69	1,186.78	4,785.78	153.56 S	230.34 E	507,164.27	784,488.75	0.00	-146.62	
4,900.00	6.00	123.69	1,286.23	4,885.23	159.35 S	239.03 E	507,158.47	784,497.44	0.00	-152.15	
5,000.00	6.00	123.69	1,385.68	4,984.68	165.15 S	247.72 E	507,152.68	784,506.13	0.00	-157.68	
5,100.00	6.00	123.69	1,485.14	5,084.14	170.94 S	256.41 E	507,146.88	784,514.83	0.00	-163.21	
5,200.00	6.00	123.69	1,584.59	5,183.59	176.73 S	265.10 E	507,141.09	784,523.52	0.00	-168.74	
5,300.00	6.00	123.69	1,684.04	5,283.04	182.53 S	273.79 E	507,135.30	784,532.21	0.00	-174.28	
5,301.49	6.00	123.69	1,685.52	5,284.52	182.61 S	273.92 E	507,135.21	784,532.34	0.00	-174.36	Drop 1° DLS
5,400.00	5.01	123.69	1,783.58	5,382.58	187.85 S	281.78 E	507,129.97	784,540.20	1.00	-179.36	
5,500.00	4.01	123.69	1,883.27	5,482.27	192.22 S	288.33 E	507,125.61	784,546.74	1.00	-183.53	
5,600.00	3.01	123.69	1,983.08	5,582.08	195.61 S	293.42 E	507,122.21	784,551.84	1.00	-186.77	
5,700.00	2.01	123.69	2,082.98	5,681.98	198.04 S	297.07 E	507,119.78	784,555.48	1.00	-189.09	
5,800.00	1.01	123.69	2,182.94	5,781.94	199.51 S	299.26 E	507,118.32	784,557.67	1.00	-190.49	
5,900.00	0.01	123.69	2,282.94	5,881.94	200.00 S	300.00 E	507,117.82	784,558.42	1.00	-190.96	
5,901.06	0.00	0.00	2,284.00	5,883.00	200.00 S	300.00 E	507,117.82	784,558.42	1.00	-190.96	Hold Vertical
6,000.00	0.00	0.00	2,382.94	5,981.94	200.00 S	300.00 E	507,117.82	784,558.42	0.00	-190.96	
6,100.00	0.00	0.00	2,482.94	6,081.94	200.00 S	300.00 E	507,117.82	784,558.42	0.00	-190.96	
6,200.00	0.00	0.00	2,582.94	6,181.94	200.00 S	300.00 E	507,117.82	784,558.42	0.00	-190.96	
6,300.00	0.00	0.00	2,682.94	6,281.94	200.00 S	300.00 E	507,117.82	784,558.42	0.00	-190.96	
6,400.00	0.00	0.00	2,782.94	6,381.94	200.00 S	300.00 E	507,117.82	784,558.42	0.00	-190.96	
6,500.00	0.00	0.00	2,882.94	6,481.94	200.00 S	300.00 E	507,117.82	784,558.42	0.00	-190.96	
6,600.00	0.00	0.00	2,982.94	6,581.94	200.00 S	300.00 E	507,117.82	784,558.42	0.00	-190.96	
6,700.00	0.00	0.00	3,082.94	6,681.94	200.00 S	300.00 E	507,117.82	784,558.42	0.00	-190.96	
6,800.00	0.00	0.00	3,182.94	6,781.94	200.00 S	300.00 E	507,117.82	784,558.42	0.00	-190.96	
6,900.00	0.00	0.00	3,282.94	6,881.94	200.00 S	300.00 E	507,117.82	784,558.42	0.00	-190.96	
7,000.00	0.00	0.00	3,382.94	6,981.94	200.00 S	300.00 E	507,117.82	784,558.42	0.00	-190.96	
7,100.00	0.00	0.00	3,482.94	7,081.94	200.00 S	300.00 E	507,117.82	784,558.42	0.00	-190.96	
7,200.00	0.00	0.00	3,582.94	7,181.94	200.00 S	300.00 E	507,117.82	784,558.42	0.00	-190.96	
7,300.00	0.00	0.00	3,682.94	7,281.94	200.00 S	300.00 E	507,117.82	784,558.42	0.00	-190.96	
7,400.00	0.00	0.00	3,782.94	7,381.94	200.00 S	300.00 E	507,117.82	784,558.42	0.00	-190.96	

Plan Report for 1H - Plan 1

Measured Depth (usft)	Inclination (°)	Grid Azimuth (°)	TVD below System (usft)	Vertical Depth (usft)	Local Coordinates		Map Coordinates		Dogleg Rate (°/100usft)	Vertical Section (usft)	Comments
Depth (usft)	Inclination (°)	Grid Azimuth (°)	System (usft)	Depth (usft)	Northing (usft)	Easting (usft)	Northing (usft)	Easting (usft)			
7,500.00	0.00	0.00	3,882.94	7,481.94	200.00 S	300.00 E	507,117.82	784,558.42	0.00	-190.96	
7,600.00	0.00	0.00	3,982.94	7,581.94	200.00 S	300.00 E	507,117.82	784,558.42	0.00	-190.96	
7,700.00	0.00	0.00	4,082.94	7,681.94	200.00 S	300.00 E	507,117.82	784,558.42	0.00	-190.96	
7,800.00	0.00	0.00	4,182.94	7,781.94	200.00 S	300.00 E	507,117.82	784,558.42	0.00	-190.96	
7,900.00	0.00	0.00	4,282.94	7,881.94	200.00 S	300.00 E	507,117.82	784,558.42	0.00	-190.96	
8,000.00	0.00	0.00	4,382.94	7,981.94	200.00 S	300.00 E	507,117.82	784,558.42	0.00	-190.96	
8,100.00	0.00	0.00	4,482.94	8,081.94	200.00 S	300.00 E	507,117.82	784,558.42	0.00	-190.96	
8,200.00	0.00	0.00	4,582.94	8,181.94	200.00 S	300.00 E	507,117.82	784,558.42	0.00	-190.96	
8,300.00	0.00	0.00	4,682.94	8,281.94	200.00 S	300.00 E	507,117.82	784,558.42	0.00	-190.96	
8,339.73	0.00	0.00	4,722.67	8,321.67	200.00 S	300.00 E	507,117.82	784,558.42	0.00	-190.96	Bone Spring
8,400.00	0.00	0.00	4,782.94	8,381.94	200.00 S	300.00 E	507,117.82	784,558.42	0.00	-190.96	
8,429.73	0.00	0.00	4,812.67	8,411.67	200.00 S	300.00 E	507,117.82	784,558.42	0.00	-190.96	Avalon
8,500.00	0.00	0.00	4,882.94	8,481.94	200.00 S	300.00 E	507,117.82	784,558.42	0.00	-190.96	
8,600.00	0.00	0.00	4,982.94	8,581.94	200.00 S	300.00 E	507,117.82	784,558.42	0.00	-190.96	
8,700.00	0.00	0.00	5,082.94	8,681.94	200.00 S	300.00 E	507,117.82	784,558.42	0.00	-190.96	
8,800.00	0.00	0.00	5,182.94	8,781.94	200.00 S	300.00 E	507,117.82	784,558.42	0.00	-190.96	
8,900.00	0.00	0.00	5,282.94	8,881.94	200.00 S	300.00 E	507,117.82	784,558.42	0.00	-190.96	
9,000.00	0.00	0.00	5,382.94	8,981.94	200.00 S	300.00 E	507,117.82	784,558.42	0.00	-190.96	
9,003.81	0.00	0.00	5,386.75	8,985.75	200.00 S	300.00 E	507,117.82	784,558.42	0.00	-190.96	Build 12° DLS
9,019.73	1.91	359.47	5,402.66	9,001.66	199.73 S	300.00 E	507,118.09	784,558.41	12.00	-190.69	1st Bone Spring
9,100.00	11.54	359.47	5,482.29	9,081.29	190.34 S	299.91 E	507,127.48	784,558.33	12.00	-181.31	
9,200.00	23.54	359.47	5,577.46	9,176.46	160.26 S	299.63 E	507,157.57	784,558.05	12.00	-151.25	
9,300.00	35.54	359.47	5,664.30	9,263.30	111.04 S	299.18 E	507,206.78	784,557.59	12.00	-102.07	
9,400.00	47.54	359.47	5,739.01	9,338.01	44.85 S	298.56 E	507,272.97	784,556.98	12.00	-35.92	
9,500.00	59.54	359.47	5,798.33	9,397.33	35.43 N	297.82 E	507,353.25	784,556.24	12.00	44.30	
9,600.00	71.54	359.47	5,839.65	9,438.65	126.29 N	296.98 E	507,444.11	784,555.39	12.00	135.09	
9,700.00	83.54	359.47	5,861.18	9,460.18	223.75 N	296.08 E	507,541.57	784,554.49	12.00	232.49	
9,760.48	90.80	359.47	5,864.17	9,463.17	284.11 N	295.52 E	507,601.93	784,553.93	12.00	292.80	Landing Point
9,800.00	90.80	359.47	5,863.61	9,462.61	323.63 N	295.15 E	507,641.45	784,553.57	0.00	332.29	
9,900.00	90.80	359.47	5,862.22	9,461.22	423.62 N	294.22 E	507,741.44	784,552.64	0.00	432.21	
10,000.00	90.80	359.47	5,860.82	9,459.82	523.60 N	293.30 E	507,841.42	784,551.71	0.00	532.12	
10,100.00	90.80	359.47	5,859.43	9,458.43	623.59 N	292.37 E	507,941.41	784,550.79	0.00	632.03	
10,200.00	90.80	359.47	5,858.03	9,457.03	723.57 N	291.45 E	508,041.40	784,549.86	0.00	731.95	
10,300.00	90.80	359.47	5,856.63	9,455.63	823.56 N	290.52 E	508,141.38	784,548.94	0.00	831.86	
10,400.00	90.80	359.47	5,855.24	9,454.24	923.54 N	289.59 E	508,241.37	784,548.01	0.00	931.78	
10,500.00	90.80	359.47	5,853.84	9,452.84	1,023.53 N	288.67 E	508,341.35	784,547.08	0.00	1,031.69	
10,600.00	90.80	359.47	5,852.45	9,451.45	1,123.52 N	287.74 E	508,441.34	784,546.16	0.00	1,131.60	
10,700.00	90.80	359.47	5,851.05	9,450.05	1,223.50 N	286.82 E	508,541.33	784,545.23	0.00	1,231.52	
10,800.00	90.80	359.47	5,849.65	9,448.65	1,323.49 N	285.89 E	508,641.31	784,544.31	0.00	1,331.43	
10,900.00	90.80	359.47	5,848.26	9,447.26	1,423.47 N	284.96 E	508,741.30	784,543.38	0.00	1,431.34	
11,000.00	90.80	359.47	5,846.86	9,445.86	1,523.46 N	284.04 E	508,841.28	784,542.45	0.00	1,531.26	

Plan Report for 1H - Plan 1

Measured Depth (usft)	Inclination (°)	Grid Azimuth (°)	TVD below System (usft)	Vertical Depth (usft)	Local Coordinates		Map Coordinates		Dogleg Rate (°/100usft)	Vertical Section (usft)	Comments
					Northing (usft)	Easting (usft)	Northing (usft)	Easting (usft)			
11,100.00	90.80	359.47	5,845.46	9,444.46	1,623.45 N	283.11 E	508,941.27	784,541.53	0.00	1,631.17	
11,200.00	90.80	359.47	5,844.07	9,443.07	1,723.43 N	282.19 E	509,041.26	784,540.60	0.00	1,731.09	
11,300.00	90.80	359.47	5,842.67	9,441.67	1,823.42 N	281.26 E	509,141.24	784,539.68	0.00	1,831.00	
11,400.00	90.80	359.47	5,841.28	9,440.28	1,923.40 N	280.33 E	509,241.23	784,538.75	0.00	1,930.91	
11,500.00	90.80	359.47	5,839.88	9,438.88	2,023.39 N	279.41 E	509,341.21	784,537.82	0.00	2,030.83	
11,600.00	90.80	359.47	5,838.48	9,437.48	2,123.38 N	278.48 E	509,441.20	784,536.90	0.00	2,130.74	
11,700.00	90.80	359.47	5,837.09	9,436.09	2,223.36 N	277.56 E	509,541.19	784,535.97	0.00	2,230.65	
11,800.00	90.80	359.47	5,835.69	9,434.69	2,323.35 N	276.63 E	509,641.17	784,535.05	0.00	2,330.57	
11,900.00	90.80	359.47	5,834.29	9,433.29	2,423.33 N	275.70 E	509,741.16	784,534.12	0.00	2,430.48	
12,000.00	90.80	359.47	5,832.90	9,431.90	2,523.32 N	274.78 E	509,841.14	784,533.19	0.00	2,530.40	
12,100.00	90.80	359.47	5,831.50	9,430.50	2,623.31 N	273.85 E	509,941.13	784,532.27	0.00	2,630.31	
12,200.00	90.80	359.47	5,830.11	9,429.11	2,723.29 N	272.93 E	510,041.12	784,531.34	0.00	2,730.22	
12,300.00	90.80	359.47	5,828.71	9,427.71	2,823.28 N	272.00 E	510,141.10	784,530.42	0.00	2,830.14	
12,400.00	90.80	359.47	5,827.31	9,426.31	2,923.26 N	271.07 E	510,241.09	784,529.49	0.00	2,930.05	
12,500.00	90.80	359.47	5,825.92	9,424.92	3,023.25 N	270.15 E	510,341.07	784,528.56	0.00	3,029.97	
12,600.00	90.80	359.47	5,824.52	9,423.52	3,123.24 N	269.22 E	510,441.06	784,527.64	0.00	3,129.88	
12,700.00	90.80	359.47	5,823.12	9,422.12	3,223.22 N	268.30 E	510,541.05	784,526.71	0.00	3,229.79	
12,800.00	90.80	359.47	5,821.73	9,420.73	3,323.21 N	267.37 E	510,641.03	784,525.79	0.00	3,329.71	
12,900.00	90.80	359.47	5,820.33	9,419.33	3,423.19 N	266.44 E	510,741.02	784,524.86	0.00	3,429.62	
13,000.00	90.80	359.47	5,818.94	9,417.94	3,523.18 N	265.52 E	510,841.00	784,523.93	0.00	3,529.53	
13,100.00	90.80	359.47	5,817.54	9,416.54	3,623.17 N	264.59 E	510,940.99	784,523.01	0.00	3,629.45	
13,200.00	90.80	359.47	5,816.14	9,415.14	3,723.15 N	263.67 E	511,040.98	784,522.08	0.00	3,729.36	
13,300.00	90.80	359.47	5,814.75	9,413.75	3,823.14 N	262.74 E	511,140.96	784,521.16	0.00	3,829.28	
13,400.00	90.80	359.47	5,813.35	9,412.35	3,923.12 N	261.81 E	511,240.95	784,520.23	0.00	3,929.19	
13,500.00	90.80	359.47	5,811.95	9,410.95	4,023.11 N	260.89 E	511,340.93	784,519.30	0.00	4,029.10	
13,600.00	90.80	359.47	5,810.56	9,409.56	4,123.10 N	259.96 E	511,440.92	784,518.38	0.00	4,129.02	
13,700.00	90.80	359.47	5,809.16	9,408.16	4,223.08 N	259.04 E	511,540.91	784,517.45	0.00	4,228.93	
13,800.00	90.80	359.47	5,807.77	9,406.77	4,323.07 N	258.11 E	511,640.89	784,516.53	0.00	4,328.84	
13,900.00	90.80	359.47	5,806.37	9,405.37	4,423.05 N	257.18 E	511,740.88	784,515.60	0.00	4,428.76	
14,000.00	90.80	359.47	5,804.97	9,403.97	4,523.04 N	256.26 E	511,840.86	784,514.67	0.00	4,528.67	
14,100.00	90.80	359.47	5,803.58	9,402.58	4,623.03 N	255.33 E	511,940.85	784,513.75	0.00	4,628.59	
14,200.00	90.80	359.47	5,802.18	9,401.18	4,723.01 N	254.41 E	512,040.84	784,512.82	0.00	4,728.50	
14,300.00	90.80	359.47	5,800.78	9,399.78	4,823.00 N	253.48 E	512,140.82	784,511.90	0.00	4,828.41	
14,400.00	90.80	359.47	5,799.39	9,398.39	4,922.98 N	252.55 E	512,240.81	784,510.97	0.00	4,928.33	
14,500.00	90.80	359.47	5,797.99	9,396.99	5,022.97 N	251.63 E	512,340.79	784,510.04	0.00	5,028.24	
14,600.00	90.80	359.47	5,796.60	9,395.60	5,122.96 N	250.70 E	512,440.78	784,509.12	0.00	5,128.16	
14,700.00	90.80	359.47	5,795.20	9,394.20	5,222.94 N	249.78 E	512,540.76	784,508.19	0.00	5,228.07	
14,800.00	90.80	359.47	5,793.80	9,392.80	5,322.93 N	248.85 E	512,640.75	784,507.27	0.00	5,327.98	
14,900.00	90.80	359.47	5,792.41	9,391.41	5,422.91 N	247.92 E	512,740.74	784,506.34	0.00	5,427.90	
15,000.00	90.80	359.47	5,791.01	9,390.01	5,522.90 N	247.00 E	512,840.72	784,505.41	0.00	5,527.81	
15,100.00	90.80	359.47	5,789.62	9,388.62	5,622.89 N	246.07 E	512,940.71	784,504.49	0.00	5,627.72	

Plan Report for 1H - Plan 1

Measured Depth (usft)	Inclination (°)	Grid Azimuth (°)	TVD below System (usft)	Vertical Depth (usft)	Local Coordinates		Map Coordinates		Dogleg Rate (°/100usft)	Vertical Section (usft)	Comments
					Northing (usft)	Easting (usft)	Northing (usft)	Easting (usft)			
15,200.00	90.80	359.47	5,788.22	9,387.22	5,722.87 N	245.15 E	513,040.69	784,503.56	0.00	5,727.64	
15,300.00	90.80	359.47	5,786.82	9,385.82	5,822.86 N	244.22 E	513,140.68	784,502.64	0.00	5,827.55	
15,400.00	90.80	359.47	5,785.43	9,384.43	5,922.84 N	243.29 E	513,240.67	784,501.71	0.00	5,927.47	
15,500.00	90.80	359.47	5,784.03	9,383.03	6,022.83 N	242.37 E	513,340.65	784,500.78	0.00	6,027.38	
15,600.00	90.80	359.47	5,782.63	9,381.63	6,122.82 N	241.44 E	513,440.64	784,499.86	0.00	6,127.29	
15,700.00	90.80	359.47	5,781.24	9,380.24	6,222.80 N	240.52 E	513,540.62	784,498.93	0.00	6,227.21	
15,800.00	90.80	359.47	5,779.84	9,378.84	6,322.79 N	239.59 E	513,640.61	784,498.01	0.00	6,327.12	
15,900.00	90.80	359.47	5,778.45	9,377.45	6,422.77 N	238.66 E	513,740.60	784,497.08	0.00	6,427.03	
16,000.00	90.80	359.47	5,777.05	9,376.05	6,522.76 N	237.74 E	513,840.58	784,496.15	0.00	6,526.95	
16,100.00	90.80	359.47	5,775.65	9,374.65	6,622.74 N	236.81 E	513,940.57	784,495.23	0.00	6,626.86	
16,200.00	90.80	359.47	5,774.26	9,373.26	6,722.73 N	235.89 E	514,040.55	784,494.30	0.00	6,726.78	
16,300.00	90.80	359.47	5,772.86	9,371.86	6,822.72 N	234.96 E	514,140.54	784,493.37	0.00	6,826.69	
16,400.00	90.80	359.47	5,771.46	9,370.46	6,922.70 N	234.03 E	514,240.53	784,492.45	0.00	6,926.60	
16,500.00	90.80	359.47	5,770.07	9,369.07	7,022.69 N	233.11 E	514,340.51	784,491.52	0.00	7,026.52	
16,600.00	90.80	359.47	5,768.67	9,367.67	7,122.67 N	232.18 E	514,440.50	784,490.60	0.00	7,126.43	
16,700.00	90.80	359.47	5,767.28	9,366.28	7,222.66 N	231.26 E	514,540.48	784,489.67	0.00	7,226.34	
16,800.00	90.80	359.47	5,765.88	9,364.88	7,322.65 N	230.33 E	514,640.47	784,488.74	0.00	7,326.26	
16,900.00	90.80	359.47	5,764.48	9,363.48	7,422.63 N	229.40 E	514,740.46	784,487.82	0.00	7,426.17	
17,000.00	90.80	359.47	5,763.09	9,362.09	7,522.62 N	228.48 E	514,840.44	784,486.89	0.00	7,526.09	
17,099.35	90.80	359.47	5,761.70	9,360.70	7,621.95 N	227.56 E	514,939.77	784,485.97	0.00	7,625.35	BHL

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
2,000.00	2,000.00	0.00	0.00	Nudge 2° DLS
2,299.79	2,299.24	-8.69	13.04	Hold 6° inc
5,301.49	5,284.52	-182.61	273.92	Drop 1° DLS
5,901.06	5,883.00	-200.00	300.00	Hold Vertical
9,003.81	8,985.75	-200.00	300.00	Build 12° DLS
9,760.48	9,463.17	284.11	295.52	Landing Point
17,099.35	9,360.70	7,621.95	227.56	BHL

Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	Origin		Start TVD (usft)
				+N/-S (usft)	+E/-W (usft)	
User	No Target (Freehand)	1.71	Slot	0.00	0.00	0.00

Plan Report for 1H - Plan 1

Survey tool program

From (usft)	To (usft)	Survey/Plan	Survey Tool
0.00	17,098.73	Plan 1	MWD

Casing Details

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
1,000.00	1,000.00	13 3/8"	13-3/8	17-1/2

Formation Details

Measured Depth (usft)	Vertical Depth (usft)	TVDSS (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
549.00	549.00	-3,050.00	Rustler		-0.80	1.71
1,549.00	1,549.00	-2,050.00	Top of Salt		-0.80	1.71
3,557.51	3,549.00	-50.00	Base of Salt		-0.80	1.71
4,438.01	4,424.00	825.00	Delaware		-0.80	1.71
8,339.73	8,319.00	4,720.00	Bone Spring		-0.80	1.71
8,429.73	8,409.00	4,810.00	Avalon		-0.80	1.71
9,019.73	8,999.00	5,400.00	1st Bone Spring		-0.80	1.71

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
Loveland BS1 State Com BHL ()	0.00	0.00	0.00	7,621.95	227.56	514,939.77	784,485.97	32.41231100	-103.41148900
- plan misses target center by 7625.35usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E)									
- Point									

Directional Difficulty Index

Average Dogleg over Survey:	0.54 °/100usft	Maximum Dogleg over Survey:	12.00 °/100usft at 9,733.47 usft
Net Tortousity applicable to Plans:	0.54 °/100usft	Directional Difficulty Index:	6.425

Plan Report for 1H - Plan 1

Audit Info

North Reference Sheet for Loveland BS1 State Com - 1H - Wellbore #1

All data is in US Feet unless otherwise stated. Directions and Coordinates are relative to Grid North Reference.

Vertical Depths are relative to GL=3574 @ 3599.00usft (KB +25'). Northing and Easting are relative to Loveland BS1 State Com

Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 3001 using datum NAD 1927 (NADCON CONUS), ellipsoid Clarke 1866

Projection method is Transverse Mercator (Gauss-Kruger)

Central Meridian is -104.3333333°, Longitude Origin:0.0000000°, Latitude Origin:0.0000000°

False Easting: 500,000.00usft, False Northing: 0.00usft, Scale Reduction: 1.00000163

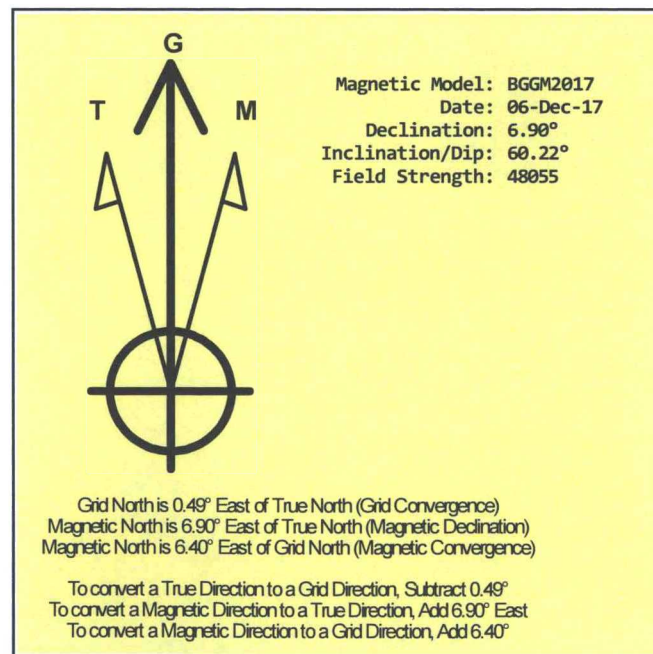
Grid Coordinates of Well: 507,317.82 usft N, 784,258.42 usft E

Geographical Coordinates of Well: 32° 23' 28.92" N, 103° 24' 44.78" W

Grid Convergence at Surface is: 0.49°

Based upon Minimum Curvature type calculations, at a Measured Depth of 17,099.35usft
the Bottom Hole Displacement is 7,625.35usft in the Direction of 1.71° (Grid).

Magnetic Convergence at surface is: -6.40° (6 December 2017, , BGGM2017)



Prepared By: _____
Date: _____
Geologist: _____
Engineer: _____

Engineer:

Proposed Well:	LOVELAND BSI STATE COM
Legals:	NWSW Sec 18 T22S R35E
API:	
Lat/Long (Nad 83)	N 32°23'29.37", W 103°24'46.50"
County and State	Lea Co., NM
Land Elev (FEET)	3574.0
Original Elev (FEET):	3599.3

Rig KB: 25

Geologic Well Prognosis

LOVELAND BSI STATE COM

Surface/Bottom Hole Footage Calls

FNL

FSL

FEL

FWL

Surface

BHL

Side-track

Sec. 18 T22S R35E		2563		660
Sec. 7 T22S R35E	380			940

Vertical Correlation Well:	State GC 1					
Legals:	SF Sec. 7 22S-75E					
API:	61-028-2659					
Lat/Long (Nad 27)	52.4006101 -103.4042302					
County and State	Lea Co. NM					
Ground Elev:						
Kelly Bushing Elev:	3625					

		(calc)	(calc)		(calc)	(calc)	(calc)	(calc)	(calc)	(calc)	(calc)	(calc)	(calc)	
Formations	Lithology	TVD (RKB)	TVD Subsea	Iso to Target	Sample Top	Δ ft	Sample <Lo Hi>	Actual Log	Δ ft	Log <Lo Hi>	Adjusted Prog Top	TVD (RKB)	TVD Subsea	Iso to Target
Rustler	Mixed lithologies	549	3050	8912		549			549			0		
Top of Salt	Salt (Halite)	1549	2050	7912		1549			1549			0		
Base of Salt	Limestone/Anhydrite	3549	50	5912		3549			3549			0		
Delaware	Sand/Siltstone/Shale/Limestone	4424	-825	5037		4424			4424			0		
Bone Spring	Limestone	8319	-4720	1142		8319			8319			0		
Avalon	Shale	8409	-4810	1052		8409			8409			0		
1st Bone Spring	Sand/Siltstone/Shale/Limestone	8999	-5400	462		8999			8999			0		
Target (α 90.8°)	Shale/Siltstone/Limestone	9461	-5862	0		9461			9461			0		
2nd Bone Spring	Sand/Siltstone/Shale/Limestone	9529	-5930	-68		9529			9529			0		
SURFACE CASING POINT														
1st INT. CASING POINT														
2nd INT. CASING POINT														
PROD. CASING POINT														